

The *Pinus flexilis* on Porter Peak is confined to the west, northwest, and northeast slopes, generally above 2560 m. A dwarf mistletoe was collected on *P. flexilis* on the northwest slope of Porter Peak and sent to Dr. Frank G. Hawksworth, U. S. Forest Service, Fort Collins, Colorado, for identification. Dr. Hawksworth (pers. comm., May 1975) identified the dwarf mistletoe as *Arceuthobium cyanocarpum* Coulter & Nelson (*Johnson 75116-1*, IFGP) and said this is the first recorded occurrence in the Panamint Range. The nearest previously recorded locality is 187 km northeast at Lake Sabrina, Inyo County, California, according to Dr. Hawksworth.

Juniperus occidentalis has been reported by Griffin and Critchfield (op. cit.) in the Panamint Range north of Panamint Pass. South of the pass I noted only a few large trees on the northeastern slope of Sentinel Peak.

The Sentinel Peak bristlecone pines warrant further study, including additional chemical analysis. One of the distinguishing characteristics used by Bailey (Ann. Missouri Bot. Gard. 57:210-249. 1970) in referring western stands of bristlecone pine to a separate species (*P. longaeva* D. K. Bailey) was the olfactory/chemical difference he noted. Zavarin and Snajberk (Biochem. Systematics 1:39-44. 1973) analyzed the wood turpentine of the eastern and western populations and found that the western stands they sampled had mainly α -pinene as the dominant monoterpene (85.3 to 98.2 percent) and 3-carene less than 2.5 percent. The eastern stands were characterized by 3-carene as the main component (62.7 to 92.1 percent) and α -pinene less than 5.3 percent. Chemical analysis of ten trees from Sentinel Peak by Zavarin (pers. comm., Oct. 1975) places this stand with the eastern populations; α -pinene ranged from 1.6 to 13.7 percent and 3-carene ranged from 76.1 to 90.9 percent. Thus, one important character distinguishing *P. longaeva* is not as clear cut as previously assumed. More detailed studies of the southern desert peak bristlecone pine stands (Telescope and Sentinel Peaks in California, the Spring Mountains, Nevada, and the San Francisco Mountains, Arizona) may reveal further evidence to clarify the taxonomic status of the western stands. Possibly treating the bristlecone pine complex as a single species with the western populations named as a subspecies would be more appropriate.—LEROY C. JOHNSON, Pacific Southwest Forest and Range Experiment Station, Forest Service, U. S. Department of Agriculture, Berkeley, California 94701

CHARLES WRIGHT'S "EL PASO" COLLECTIONS AND THE TYPE LOCALITY FOR *PSATHYROTES SCAPOSA* (COMPOSITAE).—Type localities for several taxa collected by Wright and first described by A. Gray in *Plantae Wrightianae* (Smithsonian Contr. Knowl. 3(5), 1852, and 5(6), 1853) are given variously as "Stony hills above El Paso", "Along the Rio Grande near El Paso", "Around El Paso", etc. Strother and Pilz (Madroño 23:24-40. 1975) indicated that the type locality for *Psathyrotes scaposa* A. Gray is "probably considerably southeast of El Paso, Texas, but it cannot be determined with certainty", although Gray's protologue (Pl. Wright. II:100.) gives "Stony hills above El Paso". A recent collection vindicates Gray/Wright: New Mexico, Doña Ana Co., Cerro de Los Muleros, west side of Rio Grande, near Mexico boundary, 24 May 1975, T. K. Todsén 55241, NMC, TEX, UC. (Note: Correct date for Wright's collection is May 1852, not 1851 as given by Strother and Pilz.)

Comparison of *Plantae Wrightianae* and a transcript of Wright's field notes (prepared and annotated by I. M. Johnston, 1940; original at GH, copy in Biology Library, Univ. California, Berkeley; cf. McKelvey, *Botanical exploration of the trans-Mississippi west, 1790-1850*, 1955, p. 1603 ff.) indicates that Gray frequently combined Wright's separate gatherings and that Gray frequently used "El Paso" not only for collections that Wright originally recorded under "El Paso" (or environs) but also for those recorded as "Frontera" (or environs), including "rocky hills near Frontera" and "rocky ridges across river from Frontera". The name Frontera was associated with T. Frank White's rancho, which was just north of the pass of the Rio Grande on the east side, about 9 km northwest of the plaza in

present El Paso. Wright's "rocky ridges across river from Frontera" may correspond to present Cerro de Los Muleros (across Rio Grande from site of Frontera) and probably is a good approximation to the type of locality for *Psathyrotes scaposa* and, perhaps, other plants treated in *Plantae Wrightianae*.

"El Paso" in Wright's time (1849-1852) corresponds to present Cd. Juarez, Chihuahua. Gray inexplicably cited El Paso as being in southern New Mexico. Wooton (Bull. Torrey Bot. Club 33:561-566. 1906) discussed Wright's itinerary and, perhaps similarly confused, mistakenly indicated that El Paso was then in New Mexico, which he wrongly outlined as "a somewhat indefinite area extending from well down in what is now . . . Chihuahua . . . and including some of western Texas . . ."—THOMAS K. TODSEN, Box 1464, Las Cruces, New Mexico 88001.

REVIEW

Die Vegetation Osteuropas, Nord- und Zentralasiens. By HEINRICH WALTER. xxi+ 452, 363 figs. Gustav Fischer Verlag, Stuttgart. 1974. 149 DM (\$66.).

A plant ecologist acquainted with western North American vegetation who travels eastward from Europe may sense an increasing familiarity with the vegetation. Familiar plants occur in familiar associations and habitats. An American can recognize *Artemisia frigida* and *Linaria vulgaris* as he walks across an airport that might be at Jackson, Wyoming, but is actually at Omsk in Siberia, be shocked at what looks like an Eastern Siberian shrub of *Pinus pumila* out of place in the Wind River Mts. but is actually a young, snow-deformed *Pinus albicaulis*, recognize *Hordeum jubatum* as the ubiquitous weed in several Yakutian cities, remember the larch forests of the Bitterroot Mts. as he becomes acquainted with the beautiful eastern Siberian taiga with *Larix dahurica*, recognize in a patch of talus in the Cherski Mts. the same *Dryopteris fragrans* he saw in the same kind of site near Atlin Lake in British Columbia, see *Eurotia (Ceratooides)* hundreds of kilometers disjunct both in a steppe island within the boreal taiga at Kluane Lake in the Yukon or along the Lena River. Other boreal and arctic-alpine similarities are exceedingly numerous.

Walter's authoritative book describes this Eurasiatic vegetation. It is ecological and excellent. For those to whom the Cyrillic alphabet is a block, Walter makes readily available a very rich and detailed botanical literature.

The Introduction (21 pp.) describes the flora, methods of studying vegetation, the zonal kinds of vegetation, and Walter's climatic diagrams. Arctic desert and tundra (31 pp.), boreal coniferous forest (53 pp.), transitional mixed coniferous-deciduous forest (25 pp.), nemoral deciduous forest (30 pp.), steppe (68 pp.), semi-desert and desert (99 pp.), and mountain vegetation (Urals, Altai, Crimea, and Caucasus) (82 pp.) are graphically, vividly, perceptively discussed. Walter is a superb ecologist with worldwide field experience, and his treatment is most instructive.

He is an adherent of no one phytosociological method; he uses the results of a great variety of methods of study. He shows the similarity in results achieved when stands of vegetation, which may be points on a continuum of interacting ecological sequences or ecological types, are floristically described in different ways. Since kinds of vegetation are not documented in the book by stand-species matrices, the reader must accept the interpretations suggested, but the literature references are adequate for further search and understanding.

Comparisons with western North American vegetation are often explicit, as for the aspen parkland (p. 158 ff.). No American reader will fail to be stimulated, to question our present answers to our plant ecological questions, to expand his own horizons.

The book closes with a selected reference list and a fine index to plant species and subjects. It is richly illustrated with photographs, habit sketches of particular species, diagrams, and maps. Many maps lack a scale; some lack a latitude-longitude net. Unfortunately the price is out of this world.—JACK MAJOR, Department of Botany, University of California, Davis 95616.